

WHAT IS CLAIMED IS:

1. An over shoe for use with electrosurgical instruments having a pair of juxtaposed jaw members pivotably associated with one another, at least one of which includes an electrically conductive surface disposed thereon in electrical communication with an electrosurgical energy source, said over shoe comprising:

a tissue contacting wall configured and dimensioned to selectively and substantially overlie the electrically conductive surface of the electrosurgical instrument, the tissue contacting wall including a plurality of apertures formed therethrough, the tissue contacting wall being fabricated from a non-conductive material.

2. The over shoe according to claim 1, wherein the tissue contacting wall is fabricated from a ceramic material.

3. The over shoe according to claim 2, wherein the tissue contacting wall includes a plurality of apertures arranged in pairs along a length of the electrically conductive surface.

4. The over shoe according to claim 2, wherein the apertures are randomly arranged.

5. The over shoe according to claim 3, wherein the apertures are evenly sized.

6. The over shoe according to claim 3, wherein the apertures are generally circular.

7. The over shoe according to claim 6, wherein the apertures have a diameter of about 10 μ m to about 1000 μ m.

8. The over shoe according to claim 3, wherein the apertures are elongated slots.

9. The over shoe according to claim 8, wherein the elongated slots are in at least one of a parallel orientation with respect to the longitudinal axis and at an angle with respect to the longitudinal axis.

10. The over shoe according to claim 2, further comprising a pair of side walls extending from lateral side edges of the tissue contacting wall, and a bottom wall interconnecting the pair of side walls, the tissue contacting wall, the bottom wall and the side walls defining a cavity configured and dimensioned to substantially receive a jaw member of the electrosurgical instrument.

11. The over shoe according to claim 10, wherein the bottom wall includes a longitudinally oriented slot running along a length thereof which promotes friction fit engagement between the over shoe and the jaw member.

12. The over shoe according to claim 2, further comprising at least one band extending between and engaged with each side terminal edge of the tissue contacting wall.

13. The over shoe according to claim 10, further comprising at least one inter-engaging member extending from an inner surface of at least one of the pair of side walls, the at least one inter-engaging member being configured and dimensioned to engage a complementary recess formed in the jaw member.

14. The over shoe according to claim 13, wherein the at least one inter-engaging member registers the apertures of an over shoe placed on one of the pair of jaw members relative to the apertures of an over shoe placed on the other of the other of the pair of jaw members.

15. The over shoe according to claim 14, wherein the apertures are in vertical registration relative to one another.

16. The over shoe according to claim 14, wherein the apertures are offset relative to one another.

17. The over shoe according to claim 2, wherein the tissue contacting wall has a thickness in the range of about 10µm to about 2mm.

18. The over shoe according to claim 17, wherein the thickness of the tissue contacting wall is non-uniform.

19. An over shoe for use with electrosurgical instruments capable of performing tissue sealing, the over shoe comprising:

a tissue contacting wall fabricated from a non-conductive material, the tissue contacting wall being configured and dimensioned to over lie an electrically conductive surface disposed on the electrosurgical instrument, the tissue contacting wall including at least one aperture extending therethrough.

20. The over shoe according to claim 19, wherein the tissue contacting wall is fabricated from materials having a high Comparative Tracking Index.

21. The over shoe according to claim 20, wherein the Comparative Tracking Index is in the range of about 300 to about 600 volts.

22. The over shoe according to claim 19, wherein the tissue contacting wall is fabricated from a group consisting of at least one of nylons, syndiotactic polystyrenes, polybutylene terephthalate, polycarbonate, acrylonitrile butadiene

styrene, polyphthalamide, polymide, polyethylene terephthalate, polyamide-imide, acrylic, polystyrene, polyether sulfone, aliphatic polyketone, acetal copolymer, polyurethane, nylon with polyphenylene-oxide dispersion, and acrylonitrile styrene acrylate.

23. An over shoe for use with electrosurgical instruments capable of performing tissue sealing between two opposing jaw members, the over shoe comprising:

a tissue contacting wall fabricated from a conductive material, the tissue contacting wall being disposed in electrical communication with a source of electrosurgical energy, the tissue contacting wall including at least one sidewall which depends therefrom which defines a slot for selectively receiving at least one jaw member, the tissue contacting wall including at least one aperture extending therethrough.

24. The over shoe according to claim 23, wherein the at least one jaw member is made from an insulative material.

25. The over shoe according to claim 23, further comprising a second over shoe which is designed to substantially overlie the second jaw member such that the jaw members are capable of conducting bipolar energy therethrough.

26. An over shoe for use with electrosurgical instruments capable of performing tissue sealing between two opposing jaw members, the over shoe comprising:

a tissue contacting wall fabricated from a non-conductive material, the tissue contacting wall including at least one sidewall which depends therefrom which defines a slot for selectively receiving at least one jaw member, the tissue contacting wall including at least one protrusion extending therefrom, the protrusion being disposed in electrical communication with a source of electrosurgical energy.

27. The over shoe according to claim 26, wherein both of the jaw members are designed to receive an electrically conductive over shoe such that the two opposing jaw members are capable of conducting bipolar energy through tissue held therebetween.